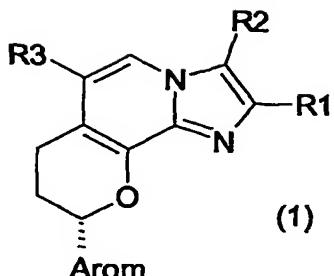


We claim:

1. A compound of the formula 1



in which

R1 is hydrogen, 1-4C-alkyl, 3-7C-cycloalkyl, 1-4C-alkoxy-1-4C-alkyl or 1-4C-alkoxycarbonyl

R2 is hydrogen, 1-4C-alkyl, halogen, 2-4C-alkenyl, 2-4C-alkynyl, hydroxy-1-4C-alkyl, 3-7C-cycloalkyl, 1-4C-alkoxycarbonyl

R3 is hydroxy-1-2C-alkyl, 1-4C-alkoxy-1-2C-alkyl, 1-4C-alkoxy-1-4C-alkoxy-1-2C-alkyl, 1-4C-alkoxycarbonyl or the radical -CO-NR31R32,

where

R31 is hydrogen, 1-7C-alkyl, hydroxy-1-4C-alkyl or 1-4C-alkoxy-1-4C-alkyl and

R32 is hydrogen, 1-7C-alkyl, hydroxy-1-4C-alkyl or 1-4C-alkoxy-1-4C-alkyl, or where

R31 and R32 together and including the nitrogen atom to which they are attached are a pyrrolidino, piperidino, morpholino radical,

Arom is a R4-, R5-, R6- and R7- substituted mono- or bicyclic aromatic radical selected from the group consisting of phenyl, naphthyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,3-triazolyl, indolyl, benzimidazolyl, furanyl (furyl), benzofuranyl (benzofuryl), thiophenyl (thienyl), benzothiophenyl (benzothienyl), thiazolyl, isoxazolyl, pyridinyl, pyrimidinyl, quinolinyl and isoquinolinyl, where

R4 is hydrogen, 1-4C-alkyl, hydroxy-1-4C-alkyl, 1-4C-alkoxy, carboxyl, 1-4C-alkoxycarbonyl, carboxy-1-4C-alkyl, 1-4C-alkoxycarbonyl-1-4C-alkyl, halogen, hydroxyl, aryl, aryl-1-4C-alkyl, aryloxy, aryl-1-4C-alkoxy, trifluoromethyl, nitro, amino, mono- or di-1-4C-alkylamino, 1-4C-alkylcarbonylamino, 1-4C-alkoxycarbonylamino, 1-4C-alkoxy-1-4C-alkoxycarbonylamino or sulfonyl,

R5 is hydrogen, 1-4C-alkyl, 1-4C-alkoxy, 1-4C-alkoxycarbonyl, halogen, trifluoromethyl or hydroxyl,

R6 is hydrogen, 1-4C-alkyl or halogen and

R7 is hydrogen, 1-4C-alkyl or halogen,

where

aryl is phenyl or substituted phenyl having one, two or three identical or different substituents from the group consisting of 1-4C-alkyl, 1-4C-alkoxy, carboxyl, 1-4C-alkoxycarbonyl, halogen, trifluoromethyl, nitro, trifluoromethoxy, hydroxyl and cyano,

and its salts.

2. A compound of the formula 1 as claimed in claim 1, in which

R1 is 1-4C-alkyl or 3-7C-cycloalkyl

R2 is 1-4C-alkyl, halogen, hydroxy-1-4C-alkyl, 2-4C-alkenyl or 3-7C-cycloalkyl,

R3 is hydroxy-1-2C-alkyl, 1-4C-alkoxy-1-2C-alkyl, 1-4C-alkoxy-1-4C-alkoxy-1-2C-alkyl, 1-4C-alkoxycarbonyl or the radical -CO-NR31R32,

where

R31 is hydrogen, 1-7C-alkyl, hydroxy-1-4C-alkyl or 1-4C-alkoxy-1-4C-alkyl and

R32 is hydrogen, 1-7C-alkyl, hydroxy-1-4C-alkyl or 1-4C-alkoxy-1-4C-alkyl,

or where

R31 and R32 together and including the nitrogen atom to which they are attached are a pyrrolidino, piperidino, morpholino radical,

Arom is a R4-, R5-, R6- and R7- substituted mono- or bicyclic aromatic radical selected from the group consisting of phenyl, naphthyl, pyrrolyl, pyrazolyl, imidazolyl, 1,2,3-triazolyl, indolyl, benzimidazolyl, furanyl (furyl), benzofuranyl (benzofuryl), thiophenyl (thienyl), benzothiophenyl (benzothienyl), thiazolyl, isoxazolyl, pyridinyl, pyrimidinyl, quinolinyl and isoquinolinyl,  
where

R4 is hydrogen, 1-4C-alkyl, hydroxy-1-4C-alkyl, 1-4C-alkoxy, carboxyl, 1-4C-alkoxycarbonyl, carboxy-1-4C-alkyl, 1-4C-alkoxycarbonyl-1-4C-alkyl, halogen, hydroxyl, aryl, aryl-1-4C-alkyl, aryloxy, aryl-1-4C-alkoxy, trifluoromethyl, nitro, amino, mono- or di-1-4C-alkylamino, 1-4C-alkylcarbonylamino, 1-4C-alkoxycarbonylamino, 1-4C-alkoxy-1-4C-alkoxycarbonylamino or sulfonyl,

R5 is hydrogen, 1-4C-alkyl, 1-4C-alkoxy, 1-4C-alkoxycarbonyl, halogen, trifluoromethyl or hydroxyl,

R6 is hydrogen, 1-4C-alkyl or halogen and

R7 is hydrogen, 1-4C-alkyl or halogen,

where

aryl is phenyl or substituted phenyl having one, two or three identical or different substituents from the group consisting of 1-4C-alkyl, 1-4C-alkoxy, carboxyl, 1-4C-alkoxycarbonyl, halogen, trifluoromethyl, nitro, trifluoromethoxy, hydroxyl and cyano,

and its salts.

3. A compound of the formula 1 as claimed in claim 1, in which

R1 is 1-4C-alkyl,

R2 is 1-4C-alkyl, halogen, hydroxy-1-4C-alkyl or 2-4C-alkenyl,

R3 is hydroxy-1-2C-alkyl, 1-4C-alkoxy-1-2C-alkyl, 1-4C-alkoxy-1-4C-alkoxy-1-2C-alkyl or the radical -CO-NR31R32,

where

R31 is hydrogen, 1-7C-alkyl,

R32 is hydrogen, 1-7C-alkyl,

or where

R31 and R32 together and including the nitrogen atom to which they are attached are a pyrrolidino, piperidino, morpholino radical,

Arom is a R4- and R5- substituted phenyl, furanyl (furyl), thiophenyl (thienyl), pyrrolyl or pyridinyl, where

R4 is hydrogen, 1-4C-alkyl, hydroxy-1-4C-alkyl, 1-4C-alkoxy, halogen or hydroxyl,

R5 is hydrogen, 1-4C-alkyl, 1-4C-alkoxy, halogen or hydroxyl,

and its salts.

4. A compound of the formula 1 as claimed in claim 1, in which

R1 is 1-4C-alkyl,

R2 is 1-4C-alkyl, halogen, hydroxyl-1-4C-alkyl or 2-4C-alkenyl,

R3 is hydroxy-1-2C-alkyl, 1-4C-alkoxy-1-2C-alkyl, 1-4C-alkoxy-1-4C-alkoxy-1-2C-alkyl or the radical -CO-NR31R32,

where

R31 is hydrogen or 1-7C-alkyl,

R32 is hydrogen or 1-7C-alkyl,

or where

R31 and R32 together and including the nitrogen atom to which they are attached are a pyrrolidino, piperidino, morpholino radical,

Arom is a R4- and R5- substituted phenyl, furanyl (furyl), thiophenyl (thienyl), pyrrolyl or pyridinyl, where

R4 is hydrogen, 1-4C-alkyl, hydroxy-1-4C-alkyl, 1-4C-alkoxy, halogen or hydroxyl,

R5 is hydrogen, 1-4C-alkyl, 1-4C-alkoxy, halogen or hydroxyl,

and its salts.

5. A compound of the formula 1 as claimed in claim 1, in which

R1 is 1-4C-alkyl,

R2 is 1-4C-alkyl, halogen or hydroxy-1-4C-alkyl,

R3 is 1-4C-alkoxy-1-2C-alkyl or the radical -CO-NR31R32,

where

R31 is hydrogen or 1-7C-alkyl,

R32 is hydrogen or 1-7C-alkyl,

or wherein

R31 and R32 together and including the nitrogen atom to which they are attached are a pyrrolidino radical,

Arom is a R4 substituted phenyl or thiophenyl (thienyl),

where

R4 is hydrogen, 1-4C-alkyl or halogen,

and its salts.

6. A compound of the formula 1 as claimed in claim 1, in which

R1 is 1-4C-alkyl,

R2 is 1-4C-alkyl,

R3 is the radical -CO-NR31R32,

where

R31 is hydrogen or 1-7C-alkyl,

R32 is hydrogen or 1-7C-alkyl,

Arom is phenyl

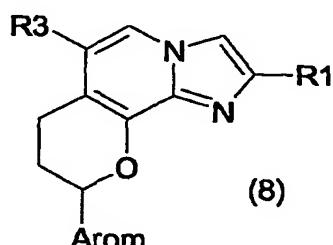
and its salts.

7. The compound (9S)-2,3-Dimethyl-9-phenyl-7H-8,9-dihydro-pyrano[2,3-c]imidazo[1,2-a]pyridine-6-carboxylic acid dimethylamide and its salts.

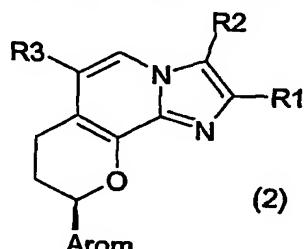
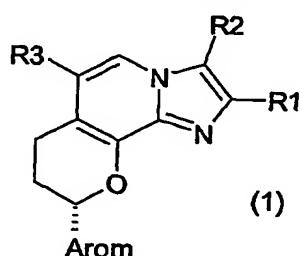
8. The compound (9S)-2,3-Dimethyl-9-(2-methylphenyl)-7H-8,9-dihydro-pyrano[2,3-c]imidazo[1,2-a]pyridine-6-carboxylic acid dimethylamide and its salts.

9. The compound (9S)-9-(4-Fluorophenyl)-2,3-dimethyl-7H-8,9-dihydro-pyrano[2,3-c]imidazo[1,2-a]pyridine-6-carboxylic acid dimethylamide and its salts.

10. A process for the synthesis of a compound of the formula 1 as claimed in claim 1, which comprises converting a compound of the formula 8, in which R1, R3 and Arom have the meanings as indicated in claim 1,



to a racemic mixture of a compound of the formula 1 as claimed in claim 1 and its optical antipode of the formula 2, wherein R1, R2, R3 and Arom have the meanings as indicated in claim 1,

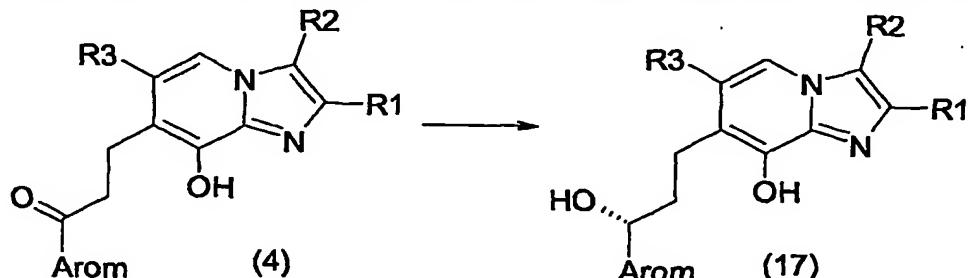


and

- separation of the compound of the formula 1 from its optical antipode of the formula 2 and
- if desired, further derivatization of the compound the formula 1 either on the stage of the racemic mixture of the compound of the formula 1 and its optical antipode of the formula 2 or after separation of the compound of the formula 1 from its optical antipode of the formula 2.

11. A process for the synthesis of a compound of the formula 1 as claimed in claim 1, which comprises

- an asymmetric reduction of a compound of the formula 4 to a compound of the formula 17



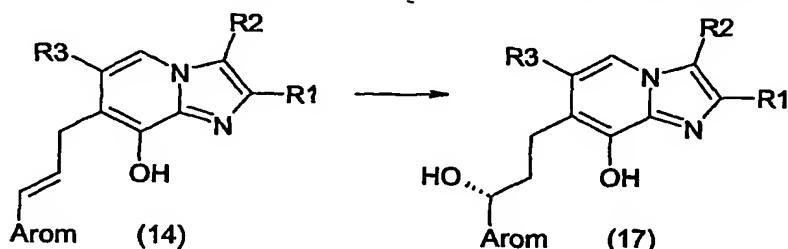
in which

R1, R2, R3 and Arom have the meanings as indicated in claim 1

- and conversion of a compound of the formula 17 into a compound of the formula 1 or its salts

12. A process for the synthesis of a compound of the formula 1 as claimed in claim 1, which comprises

- conversion of a compound of the formula 14 to a compound of the formula 17



in which

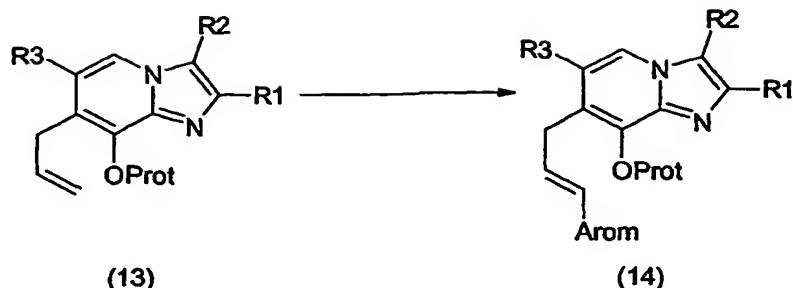
R1, R2, R3 and Arom have the meanings as indicated in claim 1.

- and conversion of a compound of the formula 17 into a compound of the formula 1 or its salts.

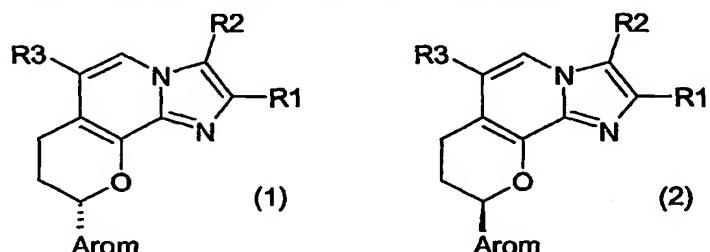
13. A process for the synthesis of a compound of the formula 1 as claimed in claim 1, which comprises

- converting a compound of the formula 13, in which R1, R2 and R3 have the meanings as indicated in claim 1, into a compound of the formula 14, in which R1, R2, R3 and Arom have the meanings as indicated in claim 1.

86



- and further conversion of the compound of the formula 14 into a racemic mixture of a compound of the formula 1 and its optical antipode of the formula 2

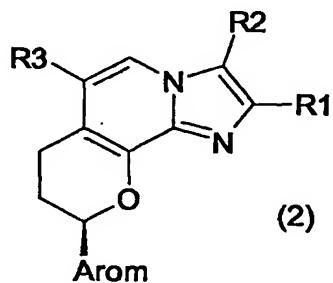


and

- separation of the compound of the formula 1 from its optical antipode of the formula 2 and
- if desired, further derivatization of the compound the formula 1 either on the stage of the racemic mixture of the compound of the formula 1 and its optical antipode of the formula 2 or after separation of the compound of the formula 1 from its optical antipode of the formula 2.

14. A medicament comprising a compound as claimed in claim 1 and/or a pharmacologically acceptable salt thereof together with customary pharmaceutical auxiliaries and/or excipients.

15. A medicament comprising a compound as claimed in claim 1 and/or a pharmacologically acceptable salt thereof together with customary pharmaceutical auxiliaries and/or excipients being substantially free of a compound of the formula 2



in which R1, R2, R3 and Arom have the meanings as indicated in claim 1.

16. The use of a compound as claimed in claim 1 and its pharmacologically acceptable salts for the prevention and treatment of gastrointestinal disorders.